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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/888,646 | 06/26/2001 | Niels Beier | 219.40064X00 | 9123 |
| 23838 | 7590 | 08/03/2004 | EXAMINER | |
| KENYON & KENYON 1500 K STREET, N.W., SUITE 700 WASHINGTON, DC 20005 | | | KLINGER, SCOTT M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2153 | |

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,646

Applicant(s)

BEIER, NIELS

Examiner

Scott M. Klinger

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-20 are pending.

Priority

No claim for priority has been made. The effective filing date for subject matter in the application is 26 June 2001.

Claim 3 contains a typo, "*a second device connected to the Ethernet frame*" should read "*a second device connected to the Ethernet backplane*"

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5-9, 11, 12, and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Katzri et al. (U.S. Patent Number 6,639,901, hereinafter "Katzri"). Katzri an apparatus for and method for supporting 802.1Q VLAN tagging with independent VLAN learning in LAN emulation networks discloses. Katzri shows,

In referring to claims 1 and 15,

- Receiving a packet, the packet including a MAC header and a payload:

"Each LAN Emulation Client (LEC) represents a set of users, as identified by their MAC addresses. A LEC emulates a LAN interface that communicates with

higher layer protocols such as IP, IPX, etc. that are used by these users.” (Katzri, col. 2, lines 51-54)

An LEC emulating a LAN interface connected to users identified by MAC addresses inherently implies receiving packets with MAC headers and payloads

- Classifying the packet:

“The main purpose of the bridge is to filter and relay frames between LAN segments by performing the functions described below. Each frame received by the bridge is classified as belonging to one and only one VLAN in accordance with a set of ingress rules.” (Katzri, col. 8, lines 31-35)

- Determining relevant generic information for the packet:

“If the data frame received is untagged, i.e., no Tag Header Information in the Ethernet frame, then the LEC entity uses the LE_ARP cache table associated with the Port VLAN L Identifier associated with the LEC (step 132).” (Katzri, col. 16, lines 1-4)

- Formatting an Ethernet frame and inserting the generic information into the type/length field of the Ethernet frame MAC header; sending the formatted Ethernet frame to a destination based on the generic information in the MAC header:

“If the LEC belongs to the tagged set of the VLAN, then the VLAN Tag Header as specified in the 802.1Q standard is sent when sending a data frame (step 136).” (Katzri, col. 16, lines 12-15)

Adding a VLAN Tag header inherently implies inserting the VLAN Tag type into the type/length field of the Ethernet frame MAC header

In referring to claim 2,

- The generic information comprises a tag/label:

Katzri, col. 16, lines 12-15 (see full quote above)

Adding a VLAN Tag header inherently implies inserting the proper VLAN Tag type into the type/length field of the Ethernet frame MAC header

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In referring to claim 5,

- Classifying the packet based on the contents of the packet payload.

“Tagged frames received and that are to be submitted to the forwarding process are classified as belonging to the VLAN identified by the VID carried in the tag header.” (Katzri, col. 8, lines 37-40)

The VID in the tag header is not part of the MAC header and is part of the payload

In referring to claim 6,

- The packet comprises one of an Internet Protocol (IP) packet and an Inter-network Packet Exchange (IPX) packet:

Katzri, col. 2, lines 51-54 (see full quote above)

In referring to claim 7,

- The Ethernet frame comprises a non-tagged IEEE 802.3 frame:

“As described hereinabove, LAN Emulation and 2.0 developed by the ATM Forum function to emulate the services provided by legacy LANs (e.g., 802.3, 802.5, etc.) across the ATM network.” (Katzri, col. 7, lines 55-58)

In referring to claim 8,

- A tagged Virtual Local Area Network (VLAN) IEEE 802.1P/802.1Q frame.

Katzri, col. 16, lines 12-15 (see full quote above)

In referring to claim 9,

- The generic information has significance globally to all devices connected to an Ethernet backplane:

Katzri, col. 16, lines 12-15 (see full quote above)

Whether the LEC belongs to the tagged set of the VLAN is significant globally to all devices connected to an Ethernet backplane

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In referring to claim 11,

- An input interface, the input interface capable of receiving a packet, the packet including a MAC header and a payload:

Katzri, col. 16, lines 1-4 (see full quote above)

- At least one processor:

A LAN Emulation Client (LEC) inherently implies a processor

- The at least processor capable of classifying the packet, determining relevant generic information for the packet, formatting an Ethernet frame, and inserting the generic information into the type/length field of the Ethernet frame MAC header; and an output interface, the output interface capable of sending the formatted Ethernet frame to a destination based on the generic information in the MAC header:

Katzri, col. 16, lines 12-15 (see full quote above)

Adding a VLAN Tag header inherently implies inserting the proper VLAN Tag type into the type/length field of the Ethernet frame MAC header

In referring to claim 12,

- The device comprises one of a router, a server, an encryption device, a voice processor, and a computing device:

An LEC is a computing device

In referring to claim 14,

- The generic information comprises a tag/label:

Katzri, col. 16, lines 12-15 (see full quote above)

Adding a VLAN Tag header inherently implies inserting the proper VLAN Tag type into the type/length field of the Ethernet frame MAC header

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In referring to claim 16,

- Classifying the packet based on the contents of the packet payload:

Katzri, col. 8, lines 37-40 (see full quote above)

The VID in the tag header is not part of the MAC header and is part of the payload

In referring to claim 17,

- The packet comprises one of an Internet Protocol (IP) packet and an Internetwork Packet Exchange (IPX) packet:

Katzri, col. 2, lines 51-54 (see full quote above)

In referring to claim 18,

- The Ethernet frame comprises a non-tagged IEEE 802.3 frame:

Katzri, col. 7, lines 55-58 (see full quote above)

In referring to claim 19,

- The Ethernet frame comprises a tagged Virtual Local Area Network (VLAN) IEEE 802.1P/802.1Q frame:

Katzri, col. 16, lines 12-15 (see full quote above)

In referring to claim 20,

- The generic information has significance one of globally to all devices connected to an Ethernet backplane and only locally to fewer than all devices connected to an Ethernet backplane:

Katzri, col. 16, lines 12-15 (see full quote above)

Whether the LEC belongs to the tagged set of the VLAN is significant globally to all devices connected to an Ethernet backplane

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katzri in view of Lorenz et al. (U.S. Patent Number 6,310,882, hereinafter "Lorenz").

In referring to claims 3, 4, and 13, although Katzri shows substantial features of the claimed invention including the system of claims 1 and 11 (see 102 rejection above), Katzri is silent as to the architecture of the device used to carry out the method of the system. Katzri does not show receiving the Ethernet frame at a first device connected to an Ethernet backplane, the destination being a second device connected to the Ethernet backplane. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Katzri as evidenced by Lorenz.

In analogous art, Lorenz discloses a high speed switch architecture using separate transmit and receive channels with independent forwarding tables. Lorenz shows receiving the Ethernet frame at a first device connected to an Ethernet backplane, the destination being a second device connected to the Ethernet backplane: *"The present invention accomplishes this object by a switching architecture which is placed between a port connecting to a fiber optic gigabit ethernet link and a 2 Gbit/sec backplane of a concentrator. A port means connects to the link for both receiving and transmitting data packets from and to the link. The port means has a concentrator side input for receiving data packets to be transmitted onto the link."* (Lorenz, col. 2, lines 1-7)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of implementing the system of Katzri so as to

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utilize a switching architecture and an Ethernet backplane, such as taught by Lorenz, in order to provide a high speed means of processing the packets.

In referring to claim 10, the implementation of the system of claim 1 described above (see 103 rejection of claims 3 and 4), the generic information has significance only locally to fewer than all devices connected to the Ethernet backplane.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Klinger whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott M. Klinger
Examiner
Art Unit 2153

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